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imagery analysis report

Activity in Support of New ICBM
Flight Test Programs at
Plesetsk, USSR (S)

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ACTIVITY IN SUPPORT OF NEW ICBM FLIGHT TEST PROGRAMS AT PLESETSK, USSR (S)

1. (S/WN) Activity underway since 1978 at Plesetsk Missile/Space Test Center SSM [] Figure 1) has been associated with the flight test programs of three new Soviet solid-propellant intercontinental ballistic missiles (ICBMs): a medium-sized, solid-propellant ICBM (medium solid ICBM); a small-sized, solid-propellant ICBM (small solid ICBM); and a solid-propellant ICBM of an undetermined size (unidentified solid ICBM). This report includes descriptions of new or modified launch test sites, missile support facilities, missile ground support equipment (GSE), and recent activity. Much of the data in this report has been previously disseminated in NPIC cables and hard-copy reports. This report is in response to a request from CIA/OSWR to compile in one report imagery-derived information on new ICBM flight test programs at Plesetsk. The information cutoff date for this report is []

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DISCUSSION

Medium Solid ICBM

2. (S/WN) Preparations for the medium solid ICBM flight test program began at Plesetsk during mid-1978. The medium solid missile will be transported and launched from a probably two-section canister that is loaded into new-type silos that have a usable depth of []. Three launch test sites, one with two scratch-built silos and two with silos undergoing conversion, were in various stages of construction at the end of the reporting period. The delivery of additional silo components indicates that the Soviets may convert/construct two more silos to support this program. Medium solid flight test missiles will be delivered to and serviced in a newly constructed missile receiving and checkout area (MRACA). No 24-meter missile railcars or new-type specialized missile railcars have been seen in the medium solid MRACA. Medium solid missile canister sections will be road transported and loaded into silos from new-type missile GSE. The lower canister section will contain a probable multistage booster and the upper canister section, when attached to the lower canister section in the silo, will protect the missile payload. Based on the type of warhead transporter identified for it, the medium solid ICBM could be flight tested with a multiple independently targetable reentry vehicle (MIRV) payload comparable in size to that of the SS-17 or SS-19. The pace of construction/modification in the medium solid MRACA and the type of activity observed this year at the completed scratch-built, medium-solid-ICBM launch test site (LTS) indicate that flight testing is imminent.

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Medium Solid Launch Test Sites

3. (TSR) Plesetsk ICBM Launch Test Site 28 [] Figure 2) is a scratch-built, dual-silo, research and development (R&D) LTS. Construction of the silos began in early 1978 and was essentially completed during late 1980. The two silos, designated silos 28A and 28B, are 100 meters apart and have silo-loading azimuths of []. In this report, the type of silo constructed at LTS 28 is referred to as an LTS 28-type silo. The LTS 28-type silo (Figure 3A)¹ is similar to the type IIH (SS-17) silo but has an approximately [] headworks (Figure 3B)¹ installed atop the last silo liner section, providing a usable depth of []. The usable depth of the type IIH silo is approximately [].

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[] Major construction of the silos at LTS 28 was completed by late 1980 and final silo fitting out and construction of silo support facilities had been completed by the end of the reporting period. A modified hardened dome and a linear antenna were constructed at silo 28A. A new-type, dome-like antenna and a uniquely configured linear-type antenna were constructed at silo 28B.

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4. (S/WN) As of [] LTS 14 and 22 were being reconfigured from type IIIE launch sites to what may be prototypes for deployed medium-solid-ICBM launch sites. Both silos were gutted in 1978 and are being converted using the same type of silo components as those used in the LTS 28-type silos. A [] lattice tower with probable telemetry and microwave antennas was erected near the end of the silo apron at LTS 22 (Figure 4). The probable telemetry antennas are oriented downrange while the probable microwave antenna is oriented toward the Plesetsk Missile Handling Facility (MHF; BE []). A new-type buried launch control building (different from the one constructed at LTS 28) was constructed next to the silo at both LTS 14 and 22. The same type of HP/TD positions installed at LTS 28 were installed in the apron of LTS 22 and will probably be installed in the apron of LTS 14. Conversion of LTS 22 was completed during June 1982 and final silo fitting out should begin soon. LTS 22 will probably be capable of supporting flight tests before the end of 1982. Although LTS 14 was gutted in 1978, installation of silo components and construction of site support facilities did not begin until early 1982. However, conversion has progressed at a rapid pace and will probably be completed before the end of 1982. LTS 14 could begin supporting the medium-solid-ICBM flight test program by early 1983.

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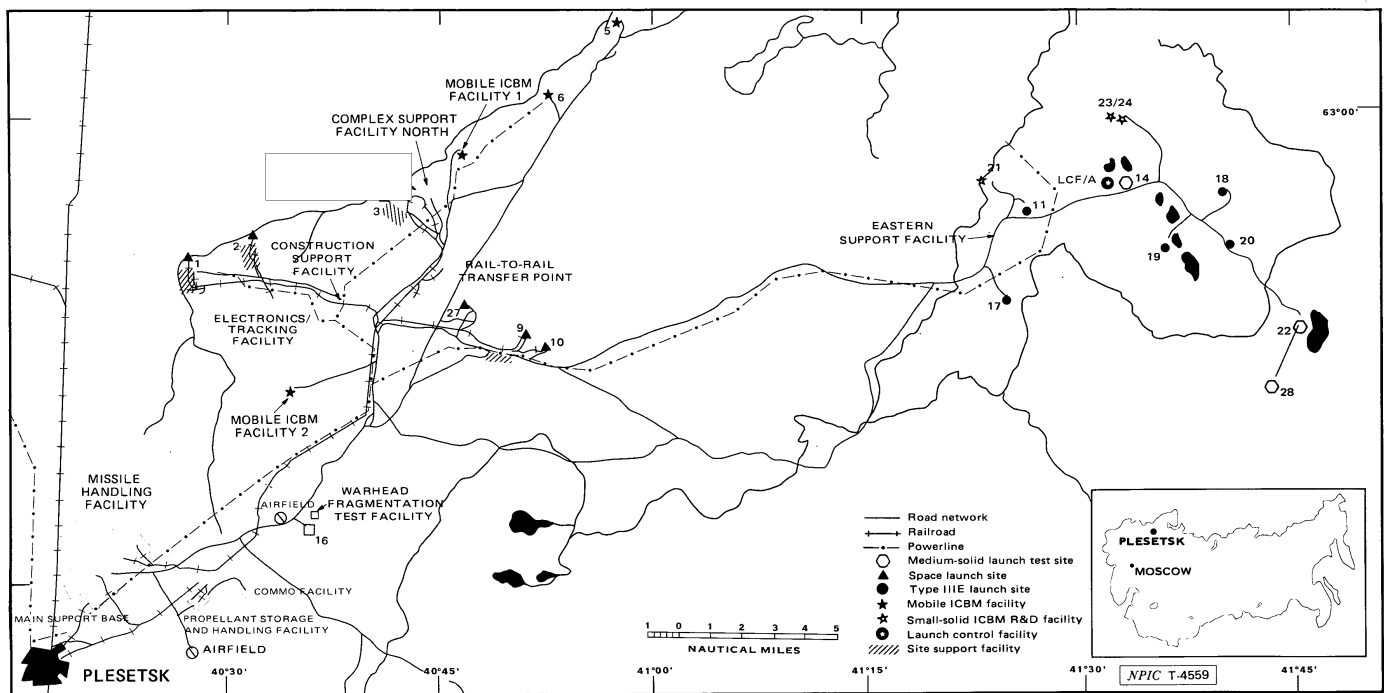


FIGURE 1. FACILITIES AT PLESETSK MISSILE/SPACE TEST CENTER SSM, USSR

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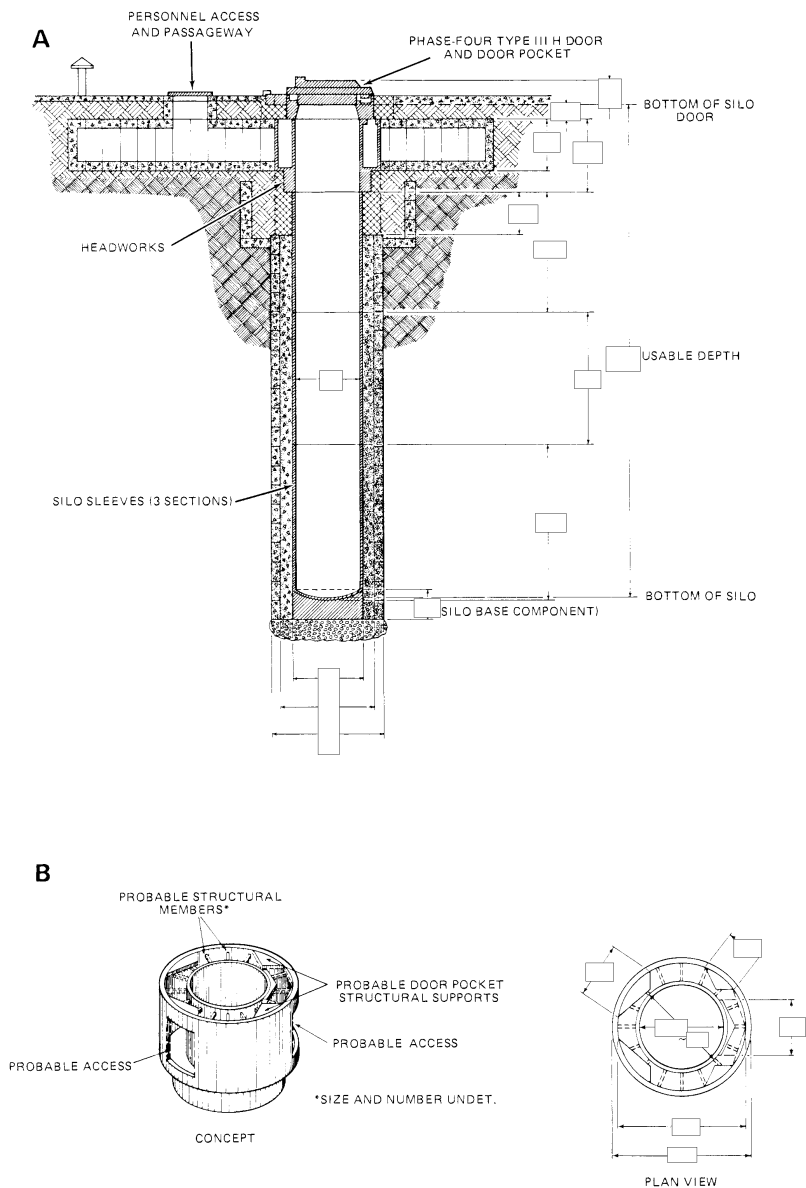


FIGURE 3. LINE DRAWINGS OF PLESETSK LTS 28-TYPE SILO AND UNIQUE COMPONENTS. Drawing A shows LTS 28-type silo. Drawing B shows silo headworks. Drawing C is a conceptual drawing of probable missile-canister suspension cage.

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Medium Solid ICBM Support Facilities

5. (S/WN) Construction of the medium solid MRACA (Figure 5) began in Plesetsk MHF in 1978. The medium solid MRACA consists of a 102-meter long, rail-through missile receiving and checkout building; a two-bay, rail-to-road transloading shed; a four-bay interim missile storage building; a high, two-bay, drive-through building; two telemetry/checkout buildings connected by an aboveground conduit; and a five-bay probable support vehicle garage under construction. A 61-meter tower with microwave and probable telemetry antennas was erected next to the 102-meter checkout building. The antennas are probably oriented toward the eastern end of the test range where LTS 14, 22 and 28 are located. Construction and cleanup of the medium solid MRACA will probably be completed during the third quarter of 1982.

6. (S/WN) Two existing facilities are probably being incorporated into the medium solid MRACA (Figure 5). In early 1982, new roads were constructed connecting the previously separately secured [redacted] with the medium solid MRACA. Also, unidentified pieces of equipment were observed outside of the [redacted] indicating that this building may have been modified. By mid-1982, a new road had been constructed connecting the separately secured SS-13 receiving/inspection/checkout (RIC) area with the medium solid MRACA. In addition, at least two of the buildings in the SS-13 RIC area were being externally modified/refurbished.

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7. (S/WN) A silo materials receiving area (SMRA), constructed next to the medium solid MRACA during 1979, is the receiving area for the components used to construct the LTS 28-type silos. The number of LTS 28-type silo components currently in the SMRA indicates that the Soviets may convert/construct two additional LTS 28-type silos. Although a fourth-generation-type launch control facility has not been identified at Plesetsk, one complete set of upper silo components for a launch control silo has been in storage in the SMRA since mid-1980. In addition, an approximately [redacted] possible intrafacility missile-handling dolly was delivered to the SMRA during June 1982.

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8. (S/WN) Plesetsk Missile/Space Test Center East Support Facility [redacted] is a vehicle maintenance and storage area for equipment used at the eastern end of the range. A new 50-meter-long, five-bay garage (Figure 6A) was constructed in the southeast end of the ESF and a concrete road-served, drive-through shed (Figure 6B) was constructed approximately 0.5 nautical mile (nm) northeast of this facility. The new garage and the existing vehicle service/parking buildings on the south side of the ESF are separately secured. The size of the garage and the timing of its construction suggest that it will be used for the new-type missile GSE associated with the medium solid ICBM. The function of the drive-through shed has not been determined. A new heavy-duty road bridge was constructed adjacent to the

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existing road bridge, 2.7 nm southwest of the ESF during 1981. This bridge was probably constructed to accommodate the weight of the medium solid ICBM and its support equipment.

GSE for the Medium Solid ICBM

9. (S/WN) A new-type missile canister transporter and a prime mover for the medium solid ICBM were identified at Plesetsk in January 1982 (Figure 7). The transporter and prime mover were delivered to and assembled in the SMRA during January 1982. The two-section transporter has an overall length of [] and an overall width of []. The transporter consists of a [] enclosed cargo section and an [] open framework-like section attached to the rear of the cargo section. Several unidentified objects/pieces of equipment were on the framework section of the transporter. At least 12 axles with heavy-duty road wheels are under the cargo section of the transporter and the framework section is probably supported by 6 axles with significantly smaller wheels. This transporter and the SS-13 missile-stage transporter/silo loader are the only Soviet missile transporters with enclosed, possibly environmentally controlled, cargo sections. The transporter is towed by a four-axle, approximately [] MAZ-type prime mover. The cab section of the prime mover is [] long and [] high. Only a small section of the back of the prime mover attaches to the underside of the front of the transporter.

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10. (S/WN) A new-type missile canister silo loader was observed only once, on imagery of []. It is approximately [] (Figure 8). There appears to be an approximately 11-meter open space under the front section of the silo loader. If this space was designed to overlap the [] rear section of the transporter, then the unidentified objects on the rear section of the transporter may provide electric/hydraulic power to both vehicles when they are positioned in tandem for missile canister roll-transfer and silo-loading operations.

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11. (S/WN) A new-type probable upper canister transporter for the medium solid ICBM was identified on imagery of [] (Figure 9). It has an overall length and width of [] respectively. It consists of an enclosed cargo section, [] long and approximately [] wide, mounted on a four-axle, split-cab MAZ-type chassis.

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12. (S/WN) The fourth major vehicle associated with the medium solid ICBM at Plesetsk is a type IV warhead transporter (Figure 10). This vehicle was initially identified at Plesetsk on [] and has previously been associated only with transporting SS-17 and SS-19 ICBM payloads. Both the SS-17 and SS-19 are deployed with MIRV payloads. It should be noted, however, that during the flight test program of the SS-17 and SS-19, both missiles were flight tested with single-reentry vehicle payloads. The type IV warhead transporter was probably used to transport and mate both the single-reentry vehicle and MIRV payloads to the missiles. In addition, five probable new-type payload handling dollies were delivered to the NPHF by early April. They have remained in the same area in front of the [] building since they were delivered.

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13. (S/WN) All Soviet ICBMs deployed since 1974 have been flight tested with a post-boost vehicle (PBV). Therefore, it is likely that the medium solid ICBM will also be flight tested with a PBV. If the PBV carried by the medium solid ICBM uses liquid propellants, it may utilize a payload-associated transporter (PAT) similar to the SS-19 PAT; however, no PAT has been identified at Plesetsk.

Activity at LTS 28 and the Medium Solid ICBM Support Areas

14. (S/WN) A high level of activity has been underway at LTS 28 since early 1982. By [] at least 10 silo/missile system checkout (S/MSO) vehicles were at LTS 28 (Figure 11). These vehicles, which appear to be a set, probably support silo-loading operations and prelaunch checkout procedures. All or most of the S/MSO vehicles have remained onsite since [] and have been observed at both silos. The new-type missile canister transporter was delivered to and assembled in the SMRA during January 1982. Road testing of the transporter was probably accomplished during late January and early February. The transporter departed the SMRA between [] and was next observed at LTS 28 on [] along with the new-type silo loader (Figure 12). The silo loader was aligned with the open silo at 28B and the transporter (with prime mover attached) was at the intersection of the silo and turnaround aprons of silo 28B. The silo loader and transporter were not present on [] and have not been seen since. The new-type probable upper canister transporter was in the ESF on [] and at LTS 28 on []. The type IV warhead transporter, which was initially identified at Plesetsk on [] was at the end of the apron of silo 28B on []. It was not present on [] and was next observed at the end of the silo 28A apron on [] (Figure 13). It was not present when LTS 28 was next imaged on []. The type and repetitive nature of the activity at LTS 28 and incomplete site security suggest that a mock-up of the medium solid missile canister may be in one or both of the silos and that silo/GSE compatibility testing and training of the crews that will handle the medium solid ICBM GSE has been underway since []. It is possible, however, that a flight test missile with R&D payload has already been loaded into one of the silos at LTS 28.

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Small Solid ICBM

15. (TSR) Preparations for the small-solid-ICBM flight test program began at Plesetsk during September 1980. The small solid missile will be transported and launched from a canister. It will probably be flight tested from two existing silos that have been modified. It could also be launched from a transporter-erector-launcher (TEL). Mobile version flight-testing could take place from a sliding-roof garage constructed near one of the modified silos, from the apron near the modified silos, or from a launch

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stand or a TEL on a pad at another LTS. The silo-launched version of the small solid ICBM will be transported by road and loaded into the modified silos using GSE originally designed for another missile system. It has not been determined whether an existing or new-type TEL will be used for the mobile version of the small solid ICBM. Activity observed at two Plesetsk mobile ICBM-associated bases indicates that the small solid ICBM may be longer than the SS-16. The SS-16 RIC area was modified to support the flight test program of the small solid ICBM. Based on the pace of construction/modification and activities observed at the modified launch test sites this year, flight-testing of the small solid ICBM will probably begin in the near future.

Small Solid ICBM Launch Test Sites

16. (S/WN) Modification and construction at Plesetsk ICBM Launch Test Site 23 Figure 14) and collocated Plesetsk ICBM Launch Test Site 24 Figure 14) indicate that the small solid ICBM may be flight tested from both a TEL and a silo (Figure 14). Modification of the silos at

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these sites was relatively minor and was accomplished between March and October 1981. Since only the type IIIE (SS-13) launch tubes and launch stand were removed from each silo, the external appearance of the silos did not change. It has not been determined what type, if any, missile canister support equipment (i.e., launch stand or suspension/shock isolation cage) was installed in either silo. Canister/capsule (can/-cap) transporter and silo-loader HP/TD positions were installed in the aprons of both sites. New launch control and support facilities were also constructed at LTS 23 and LTS 24. A buried launch control building (identical to those constructed at LTS 14 and LTS 22) was constructed adjacent to each silo and a buried launch support building (identical to that constructed at the end of the apron of silo 28A) was constructed midway between the silos. A 30-meter telemetry tower was erected at the end of each buried launch control building. Concrete conduits connect the buried launch support building to the buried launch control buildings and each silo. By June 1982, a sliding-roof, single-bay garage (Figure 15) was constructed 30 meters from the LTS 23 silo, parallel to the silo apron. The single-bay garage was constructed from the same components used to construct SS-20 single-bay garages, but an additional pair of wall stanchions makes the single-bay garage at LTS 23 two meters longer than the SS-20 single-bay garage. The standard SS-20 single-bay garage is [] long while the LTS 23 single-bay garage is [] long. Also, the concrete floor and the horizontal braces between the wall stanchion footings which are usually installed in an SS-20 single-bay garage were probably not installed in the LTS 23 single-bay garage. A possible launch reference position (LRP) was installed in the floor of the garage and appeared to be cable connected to the buried launch control building of LTS 23. The [] single-bay garage is connected by cable conduit to the newly installed launch control facilities of LTS 23 and LTS 24. LTS 23 and LTS 24 are probably capable of supporting flight tests of the small solid ICBM from both a silo and the [] single-bay garage.

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17. (S/WN) The small solid ICBM may also be flight tested from a probable launch pad at Plesetsk ICBM Launch Test Site 21 [] LTS 21 is a dual-pad soft launch site that supported flight testing of the SS-X-15 and SS-16. In 1972, a 48-meter-long framework structure was built on the east pad and pad extension to conceal SS-16 flight test activities. During the SS-16 flight test program, 24 meters of this structure were normally covered by eight [] long roof sections and the remainder of the structure was canvas covered. A possible erector was identified on imagery of [] (Inset, Figure 16) and a possible launch stand was identified on imagery of [] Both were within the framework structure (Figure 16). The possible erector consists of a possible cradle-like framework approximately 20 meters long and [] wide. The possible launch stand is shaped like a truncated cone and has a top diameter of approximately [] a base diameter of approximately [] and is approximately [] high. The possible launch stand is approximately 25 meters from the entrance of the framework and centered on a concrete probable launch pad. Reanalysis of imagery at LTS 21 since the termination of the SS-16 flight test program in April 1976 indicates that the possible launch stand and erector were probably stored within the framework structure through August 1981. During this time, the launch stand was normally positioned 21 meters from the entrance of the framework structure. Because of the extensive concealment measures used during the SS-16 flight test program, it has not been possible to prove that the possible launch stand and erector were present during that time. However, it is probable that this equipment was at LTS 21 during the flight test program of the SS-16, which suggests that some SS-16 missiles may have been launched from a stand rather than a TEL. Initial modification/refurbishment of LTS 21 began in late 1980 with the delivery of numerous crates/canvas-covered pieces of equipment (POE). The contents of the crates and/or the POE may have been components used to modify/refurbish the control bunkers at this site. No modification activity was identified at the framework structure until September 1981, when the canvas was removed from the structure. The concrete probable launch pad was installed in the structure during mid-1982. It has not been determined whether the missiles tested from a stand at LTS would be launched to the Kamchatka impact area or would be launch phase (pop-up) tested. Although final site cleanup had not been completed and the canvas had not been replaced on the framework structure as of [] this site could be ready to support the small-solid-ICBM flight test program during the third quarter of 1982.

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Small Solid ICBM Support Facilities

18. (S/WN) Modification and construction for the small-solid-ICBM flight test program began during late 1980 in the SS-16 RIC area (Figure 17). Because existing facilities were modified for the small solid ICBM, construction was less extensive than that for the medium solid ICBM. Construction of a 48-meter-long clerestory building began during September 1980 and final roofing and apron construction were still underway at the end of the reporting period. The SS-16 RIC building and probably the telemetry/support building have undergone minor modifications. A concrete-block probable parking apron (reinforced by two parallel, 18- by 4-meter, poured concrete slabs) was constructed near the SS-16 RIC building. A visual security screen had been erected around the apron and wall stanchion footings had been installed in/on the apron. If a building or open-sided shed is erected on these footings, it will be at least 48 by 12 meters. A two-bay, 18-meter-long, drive-in/drive-through shed was also constructed near the SS-16 RIC building.

19. (S/WN) Additional single-bay garage components were delivered to the SMRA between [] and have remained in approximately the same position since then. Although no footings for another single-bay garage have been identified, these components could be used to construct a [] meter, single-bay garage at LTS 21 or 24.

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20. (TSR) Recent activity at Plesetsk Mobile ICBM Facility 2 (Mob 2; [] and Plesetsk ICBM Launch Test Site 5 [] indicate that the improved small solid ICBM may be longer than

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the SS-16. At Mob 2 during May 1982, a set of hardpoints was installed at each LRP on the concrete road outside of the operations area. Each set of hardpoints consists of a front and rear pair of precast or poured concrete slabs that provide a stable base for the two pairs of leveling jacks of a TEL. The spacing of the leveling jacks is dictated by the center of gravity of the missile and each leveling jack is probably positioned at the center of each hardpoint. The rear pair of leveling jacks is probably mounted as close to the rear of the TEL as possible. The center-to-center distance between the front and rear pairs of new hardpoints and the distance from the front pair of new hardpoints to the LRP were greater at Mob 2 than the same distances identified for the SS-16 at Plesetsk (Figure 18). For the SS-16, the distance between leveling jacks is [] the distance from the front pair of leveling jacks to the LRP is [] and the erected SS-16 missile canister would probably be positioned [] behind the rear pair of TEL leveling jacks. (To a large degree, the height of the TEL determines the distance behind the TEL an erected missile canister is positioned.) An erected SS-16 missile canister would be approximately [] meters behind an LRP. A TEL positioned on the new hardpoints outside of Mob 2 would probably have leveling jacks that are approximately [] apart and the distance from the front leveling jacks to the LRP would be approximately []. If the height of the TEL used for the small solid ICBM is the same as that of the SS-16 TEL, then the distance from the LRP to the erected small solid missile canister would be approximately [] greater than for the SS-16. This suggests that the small solid ICBM may be [] longer than the SS-16. Additional support for this judgment was provided by the identification of two circular areas near two of the 12 LRPs at LTS 5. One light-toned circular area []

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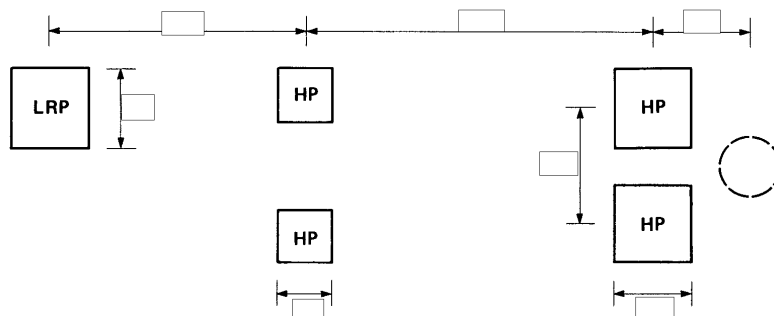
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SS-16 TEL SIGNATURE



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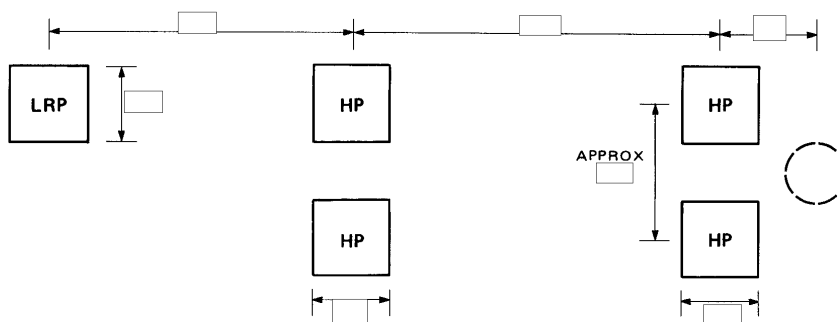
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DIMENSIONS IN METERS

OVERALL DISTANCE FROM LRP TO ERECTED MISSILE CANISTER IS [] METERS

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NEW SMALL SOLID ICBM TEL SIGNATURE



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DIMENSIONS IN METERS

OVERALL DISTANCE FROM LRP TO ERECTED MISSILE CANISTER IS [] METERS

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FIGURE 18. POSSIBLE SIGNATURE DIFFERENCE BETWEEN SS-16 AND SMALL SOLID ICBM

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meters in diameter) was on the concrete road approximately [] behind each of two LRPs in the operations area of LTS 5. Although the function of the light-toned circular areas has not been determined, they may represent the position of an erected missile canister.

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GSE for the Small Solid ICBM

21. (S/WN) One can/cap transporter and one silo loader are the only GSE that have been identified at Plesetsk for the small solid ICBM. The can/cap equipment was designed to load SS-18 missile canisters and launch control capsules into silos. The can/cap silo loader is also used to load the missile canister of the Galosh ABM-1b antiballistic missile system into silos. This equipment was delivered to Plesetsk during June and July 1981 and the parking area for this equipment is under the shed-like extension to the SS-16 RIC building (Figure 19). The assessed load-bearing capability of this equipment is probably insufficient to transport the medium solid ICBM but is sufficient for transporting the small solid ICBM.

22. (S/WN) It has not been determined whether the mobile version of the small solid ICBM will utilize an SS-16 TEL, a modified SS-16 TEL, or a new-type TEL. Some SS-16 TELs are probably at Plesetsk, but none have been seen there since April 1974. However, a new probable mobile-missile TEL chassis was identified in March 1982 at the Minsk Motor Vehicle and Guided Missile Support Equipment Plant (BE [] Figure 20). The new chassis probably has six axles and is [] long, approximately [] meters longer than the chassis used for the SS-20 TEL and probably the SS-16 TEL. (The only SS-16 TEL that has been seen without canvas covering had an overall length of [] The front two axles were obscured by shadow, but the rear four axles appeared to have the same spacing as those on the SS-16/-20 TEL chassis. The front two axles may have a larger separation than those on the SS-16/-20 TEL chassis. The additional length of the TEL appears to have been incorporated in the area immediately behind the vehicle's cab. The additional length of this probable TEL chassis also reinforces the judgment that the small solid ICBM may be longer than the SS-16. However, it is conceivable that this [] chassis is a limited modification of the standard six-axle chassis for application to a role other than mobile missile TEL (e.g., heavy-duty mobile crane, large pipe carrier, etc.). Until this chassis is observed fitted out as a TEL, it cannot be confirmed for that role.

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Activity at LTS 23 and LTS 24 and the Small Solid ICBM Support Area

23. (S/WN) Silo-GSE compatibility testing has been observed at LTS 23 and LTS 24. On [] [] the can/cap silo loader was positioned at the silo of LTS 23 and the can/cap transporter was on the turnaround apron of LTS 24 (Figure 21). After testing activity at these sites was completed, the transporter and silo loader were returned to their normal storage area in the SS-16 RIC area. Except for the recently identified possible launch stand and erector, no new-type mobile missile-associated equipment has been identified at LTS 21, LTS 23, or LTS 24.

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Unidentified Solid ICBM

24. (S/WN) Preparations for the flight test program of an unidentified solid ICBM began during August 1981. A new probable missile receiving and checkout building, which may be the initial construction for a new MRACA, is the primary indication of another solid-propellant ICBM flight test program at Plesetsk. Based on the pace of construction, the flight test program of the unidentified solid ICBM could begin during the 1984-1986 time frame.

Unidentified Solid ICBM Support Facility

25. (S/WN) A new possible MRACA for the unidentified solid ICBM was under construction 300 meters east of the SS-16 RIC area (Figure 22) at the end of the reporting period. Footings for a 102-meter-long by at least 45-meter-wide probable high-bay building had been installed in the possible MRACA. The high-bay building will be rail served and will probably be used for missile receiving and checkout. If this new possible MRACA is intended to be as large as the medium solid MRACA, then additional support buildings will be constructed over the next several years. If the timing and sequence of construction for this possible MRACA matches those for the medium solid MRACA, it may not be completed before 1985.

Possibly Related Activity

Rail Line Construction at Plesetsk

26. (S/WN) The main complex rail line serving the Plesetsk ICBM 9/10 Support Facility [] [] is being extended at least 33 nm (Figure 23). By mid-1982, construction for the rail line extended at least 0.25 nm past LTS 28, which is the easternmost and newest launch test site at Plesetsk. The rail extension, which has been under construction since August 1980, parallels the main complex road serving the eastern end of the test range. A new rail bridge has been constructed about 2.7 nm southwest of Plesetsk ESF parallel to the new road bridge that was constructed to accommodate the medium solid ICBM GSE. Prefabricated rail sections are being installed in the first 17.5 nm of the extension and the trees have been cleared for the next 15.5 nm of the extension. If the current pace of construction continues

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and if the rail line is not extended a great distance past LTS 28, the rail extension could be completed during 1984.

27. (S/WN) By May 1982, an SS-20 single-bay garage was constructed at Novaya Mezinovka Missile Support Rear Depot (MSRD; [redacted]) on an apron at the end of a receiving/checkout building (Figure 24). A standard-gauge rail line extends from the entrance of the single-bay garage for a short distance and connects with a graded railbed. On [redacted] some rail ties were in this railbed which extends to a newly installed switch in the main rail spur of the MSRD. On the same date, components for a second single-bay garage were nearby although no footings for a second single-bay garage were identified. This MSRD was initially associated with mobile missile R&D in 1976, when a prototype SS-20 remote battalion-level operations area was identified at the facility. Novaya Mezinovka MSRD supports the SS-4, the SS-5, the SS-11, and the SS-20 strategic missile systems.

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28. (S/WN) A large conduit was constructed at vulnerability area 108 of Shagan River Test Area (BE [redacted] Figure 25) between November 1979 and May 1981. The conduit was constructed from concrete wall panels and has a foundation of floor beams (each [redacted] thick and wide and spaced [redacted] meters apart) over which concrete was poured. The ceiling was also constructed from [redacted] thick and [redacted] wide beams set side by side in grooves in the tops of the walls. A layer of concrete [redacted] thick (possibly with rebar) was poured over the ceiling beams. The conduit is 244 meters long and has an internal usable width of [redacted] and an internal usable height of [redacted]. A standard-gauge rail line extends out of the conduit entrance onto a concrete apron upon which a gantry crane has been erected. Hardpoints with a separation distance of [redacted] were installed beneath the apron under the rail line. All supplies and equipment are transported by road to this area, since it is not rail served. It has been estimated that the conduit can withstand 1,500 to 2,500 pounds per square inch of overpressure.

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Imagery Analyst's Comments

29. (S/WN) At Plesetsk, most ICBM R&D flight tests have originated from the eastern end of the rangehead. Therefore, the construction of a rail line past the eastern limits of the complex suggests that rail-served ICBM launch test facilities may be constructed at Plesetsk. The rail-served single-bay garage at Novaya Mezinovka and the rail-served conduit at area 108 suggest that the Soviets may be assessing the feasibility of rail-mobile strategic missile systems. However, it is too early to associate the rail line extension at Plesetsk with a missile system.

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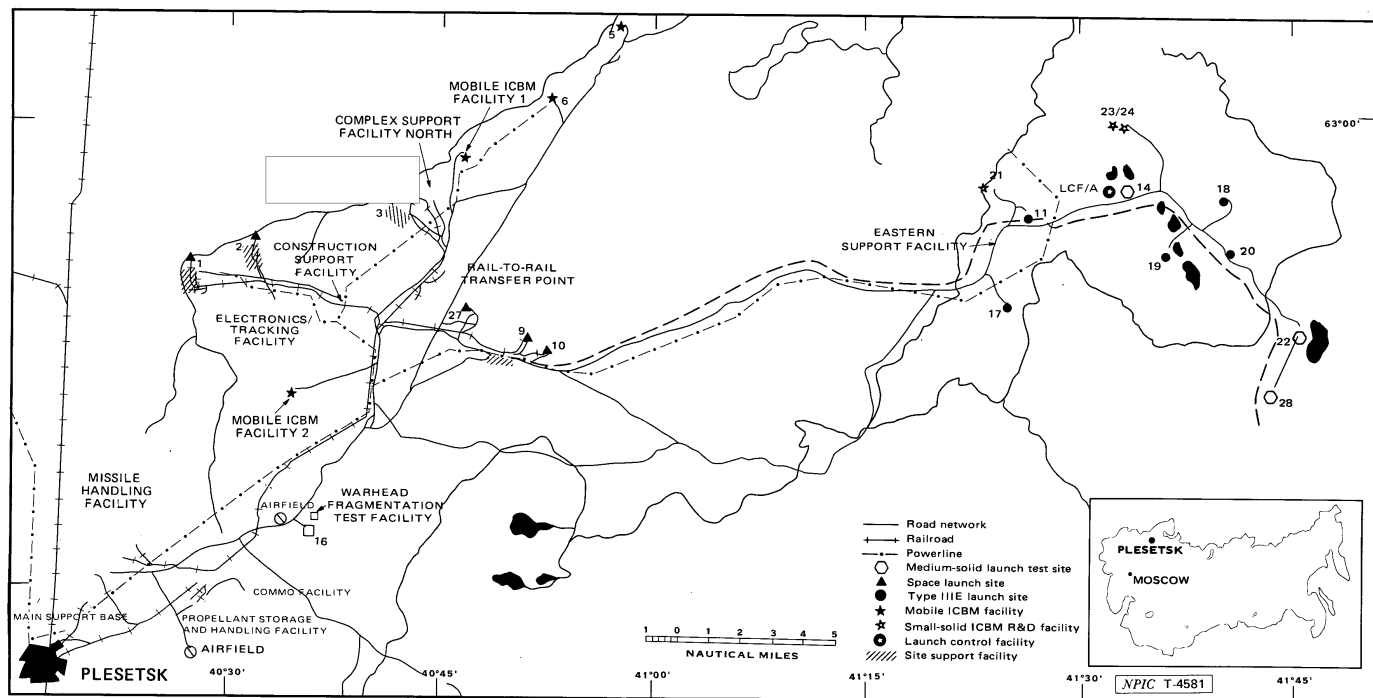


FIGURE 23. EXTENSION OF THE RAIL LINE TO THE EASTERN END OF THE PLESETSK TEST RANGE

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Top Secret RUFF**REFERENCES****IMAGERY**

(S/WN) All relevant satellite imagery acquired from January 1972 through [] was used in the preparation of this report.

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DOCUMENT

1. FTD. [] RFB-22/0022/81, *Launcher U/I Missile System, Plesetsk, (U)*, Dec 81 (TOP SECRET R*)

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*Extracted information is classified SECRET. []

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RELATED DOCUMENTS

NPIC. [] IAR-0214/81, *Reassessment of Mobile-ICBM Activity at Plesetsk Missile/Space Test Center, USSR (S)*, Nov 81 (TOP SECRET [])

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NPIC. [] IAR-0157/81, *New Silo Component at Plesetsk Missile/Space Test Center, USSR (S)*, Aug 81 (TOP SECRET [])

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FTD. [] DST-1070S-102-82-SAO, *Plesetsk Missile and Space Range (U)*, 15 Jun 82 (TOP SECRET [])

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(S) Comments and queries regarding this report are welcome. They should be directed to [] Soviet Strategic Forces Division, Imagery Exploitation Group, NPIC, []

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